

IN THE CLAIMS:

1. (Amended) An apparatus for motion detection on a compressed video sequence, comprising:  
a receiver for locating command data from the compressed video sequence; [and]  
a detector for detecting a change in the command data to indicate motion;  
wherein the command data located by the receiver comprises a quantization factor (T) of the compressed video sequence;  
wherein the detector detects change in the quantization factor to indicate motion; and  
wherein the detector detects change in the quantization factor by assessing an amount of change of a present value  $T_i$  and a previous value  $T_{i-1}$ .
2. (Original) An apparatus for motion detection according to claim 0,  
wherein the compressed video sequence received by the receiver has predetermined compressed format; and  
wherein the receiver locates the command data from the compressed video sequence by obtaining synchronization information to locate known position in the video sequence and by parsing the compressed video sequence until finding the desired command data field.
3. (Cancelled)
4. (Original) An apparatus for motion detection according to claim 0, wherein the compressed video sequence received by the receiver comprises frames of digital command data and of image data.
5. (Original) An apparatus for motion detection according to claim 0, wherein the compressed video sequence received by the receiver has a constant number of bits per frame.
6. (Amended) An apparatus for motion detection according to claim [0] 1, wherein the detector detects change in the quantization factor by assessing an amount of change of a present value  $T_i$  and a previous value  $T_{i-1}$  based on a difference between  $T_i$  and  $T_{i-1}$  [as follows:

$$\text{amount of change} = (T_i - T_{i-1}) / T_i$$

and wherein the amount of change is threshold to indicate motion].

7. (Original) An apparatus for motion detection according to claim 0, wherein the detector detects an amount of change by thresholding to indicate motion when the amount of quantization factor change is above about 20%.

8. (Original) An apparatus for motion detection according to claim 0, wherein the detector detects an amount of change by thresholding to indicate motion when the amount of quantization factor change is above between approximately 10% and 90%.

9. (Original) An apparatus for motion detection according to claim 0, wherein the detector detects an amount of change in the quantization factor by taking a derivative of the quantization factor to assess an amount of change and indicate motion.

10. (Original) An apparatus for motion detection according to claim 0, wherein the compressed video sequence received by the receiver comprises an MPEG compressed video sequence.

11. (Original) An apparatus for motion detection according to claim 0, wherein the compressed video sequence received by the receiver comprises an H.263 compressed video sequence.

12. (Original) An apparatus for motion detection according to claim 0, wherein the command data located by the receiver comprises a PQUANT quantization factor field of the H.263 compressed video sequence.

13. (Original) An apparatus for motion detection according to claim 0, wherein both the receiver and the detector operate in real time on the compressed video sequence.

14. (Amended) A method of motion detection on a compressed video sequence, comprising the steps of:

(a) locating command data from the compressed video sequence, wherein the command data comprises a quantization factor (T) of the compressed video sequence; and

(b) detecting a change in the command data to indicate motion by detecting a change in the quantization factor and assessing an amount of change of a present value  $T_i$  and a previous value  $T_{i-1}$ .

15. (Original) A method of motion detection according to claim 0,  
wherein the video sequence used in step (a) has predetermined format; and  
wherein the receiving of said step (a) comprises the substeps of  
(a1) obtaining synchronization information to locate known position in the video  
sequence; and  
(a2) parsing the compressed video sequence until finding the desired command data field.
16. (Original) A method of motion detection according to claim 0,  
wherein the command data located in step (a) comprises a quantization factor of the  
compressed video sequence; and  
wherein the detecting step (b) comprises the substep of (b1) detecting change in the  
quantization factor to indicate motion.
17. (Original) A method of motion detection according to claim 0, wherein the compressed video  
sequence used in step (a) comprises frames of digital command data and of image data.
18. (Original) A method of motion detection according to claim 0, wherein the compressed video  
sequence used in step (a) has a constant number of bits per frame.
19. (Original) A method of motion detection according to claim 0, wherein the step (b1) of  
determining change in the quantization factor comprises the substep of (b1i) taking a derivative  
of the quantization factor to assess an amount of change and indicate motion.
20. (Original) A method of motion detection according to claim 0, wherein both the steps (a) and  
(b) operate in real time on the compressed video sequence.